

**Current California Laws and Regulations
Relating to Hydrogen Fueling Stations**

California Regulation	Application	State Agency(s)	Authority Having Jurisdiction	Enforcement	Model Code or Civil Law Referenced	Locally Recognized Standards ¹	Additional CA Statutory Requirements
Overall Siting, Setbacks, and the Built Environment							
Title 24, Part 2 (1 & 2) – California Building Code	Seismic standards, materials selection, and energy efficiency of commercial structures	OSFM ² , DSA, OSHDP, HCD	Local fire department (sometimes building)	Permitted and reviewed prior to construction	1997 Uniform Building Code		
Title 24, Part 9 Article 52 - Motor Vehicle Fuel Dispensing Stations	Complete installation, equipment assemblies, individual appliances, and setbacks	OSFM, DSA, OSHDP, HCD	Local fire chief	Permitted and reviewed prior to construction (CFC Section 105, Permit m.3)	2000 Uniform Fire Code (UFC)	NFPA 30A NFPA 52 NFPA 50A/B	*5201.5.1 protection of dispensers installed at grade with provisions for point-of-sale device access in accordance with ADA.
Title 24, Part 9, (California Fire Code 2001) Article 29 – Repair Garages, Section 2903 - Repair Garages for Natural Gas and Hydrogen-Fueled Vehicle	Provided here for reference.	OSFM, DSA, OSHDP, HCD	Local fire chief	Permitted and reviewed prior to construction (CFC Section 105.8, Permit r.3)	2000 Uniform Fire Code (UFC)	NFPA 88B	
Title 8, Division 1, Chapter 4 – Division of Industrial Safety, Subchapter 7 - General Industry Safety Orders (especially Article 138,	Minimum standards for safety orders for all places of employment in California including special provisions for certain employment environments,	DOSH	CalOSHA (& DOSH Pressure Vessel Unit in cases of hydrogen storage)	Same as above for all Title 8, Division 1 enforcement	*ASME BPV Code, B31.3 **Various NFPA (inc. NFPA 50, 496) ***API Standard 620	See note above for Title 8, Division 1	Same as above for all Title 8, Division 1 variances

¹ Nationally recognized standards, like NFPA standards, may be used in subject areas not regulated by Title 24, Part 9 (See CFC Section 101.3).

² See list of acronyms used at bottom.

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"Hydrogen", Sections 5465-5498)	applications, and equipment (including signage, setbacks, materials, design, etc.)				****CGA Pamphlet S-1 *****Some UL		
California Regulation	Application	State Agency(s)	Authority Having Jurisdiction	Enforcement	Model Code or Civil Law Referenced	Locally Recognized Standards	Additional CA Statutory Requirements
<i>Subsystems and Assemblies</i>							
Title 24, Part 3 – California Electrical Code	Wiring, lighting in classified areas	OSFM, DSA, OSHPD, HCD	Local building & fire departments	Permitted and reviewed prior to construction	1999 National Electrical Code (NFPA 70)		
Title 24, Part 4 – California Mechanical Code	Heating, ventilation, and cooling systems (and other heating appliances)	OSFM, DSA, OSHPD, HCD	Local building & fire departments	Permitted and reviewed prior to construction	2000 Uniform Mechanical Code of IAPMO		
Title 8, Division 1, Chapter 4 – Division of Industrial Safety, Subchapters 4 & 5 – for Construction and Electrical Safety Orders	Construction and electrical safety minimum state standards for places of employment	DOSH	CalOSHA	Same as above for all Title 8, Division 1 enforcement	*NFPA (inc. NFPA 30, 70) **Some UL	See note above for Title 8, Division 1	Same as above for all Title 8, Division 1 variances
<i>Fuel Storage, Piping, and Handling</i>							
Title 24, Part 9 Article 74 - Compressed Gases	Handling, storage, dispensing of compressed hydrogen	OSFM, DSA, OSHPD, HCD	Local fire chief	Permitted and reviewed prior to construction (CFC Section 105, Permit c.7)	2000 Uniform Fire Code (UFC)	NFPA 50A	
Title 24, Part 9 Article 75 - Cryogenic Fluids	Handling, storage, dispensing of cryogenic liquid hydrogen	OSFM, DSA, OSHPD, HCD	Local fire chief	Permitted and reviewed prior to construction (CFC Section 105, Permit c.9)	2000 Uniform Fire Code (UFC)	NFPA 50B	
Title 24, Part 9 Article 80 - Hazardous Materials	Handling, storage, dispensing of hydrogen	OSFM, DSA, OSHPD,	Local fire chief	Permitted and reviewed prior to construction (CFC Section 105,	2000 Uniform Fire Code (UFC)		*California Health and Safety Code Requirements for

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		HCD		Permit h.1)			HMMP and HMIS (see below) **8003.1.4.2 – No emergency ventilation system shutoff required for exhaust systems venting flammable gases completely exhausted to outside air
California Regulation	Application	State Agency(s)	Authority Having Jurisdiction	Enforcement	Model Code or Civil Law Referenced	Locally Recognized Standards	Additional CA Statutory Requirements
Fuel Storage, Piping, and Handling (continued)							
Title 8, Division 1, Chapter 4 – Division of Industrial Safety, Subchapter 1 – Unfired Pressure Vessel Safety Orders (especially Section 460)	High pressure or cryogenic storage and piping requirements for the human interactive working environment; Hydrogen storage and piping	DOSH	CalOSHA (& DOSH Pressure Vessel Unit)	Compliance incumbent upon employer/owner, CalOSHA will inspect if found to be out of compliance	*ASME BPV Code, B31.3 **NFPA 58, NFPA Pamphlet 59A ***Some UL	NOTE – DOSH/ CalOSHA authority may supercede local approval in some areas	Title 8, Division 1, Chapter 3.3 & 3.5 – Occupational Safety and Health Appeals & Standards Boards – for temporary and permanent variances
Title 8, Division 1, Chapter 4 – Division of Industrial Safety, Subchapter 2 – Boiler and Fired Pressure Vessel Safety Orders	Any boiler or fired pressure vessels in the human interactive working environment	DOSH	CalOSHA (& DOSH Pressure Vessel Unit)	Same as above for all Title 8, Division 1 enforcement	*ASME BPV Code, ASME B31.3	See note above for Title 8, Division 1	Same as above for all Title 8, Division 1 variances
Title 19, Division 2, Chapter 4 – Hazardous Material Release	Any storage, use, or handling of hazardous materials	OES, UPS	*Local Fire Dept. **Local CUPA	*Annual resubmission **Requirements include an HMBP with HMMP,	*California Health and Safety Code		

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Reporting, Inventory, and Response Plans Especially Section 2720				HPIS and emergency response plan	(Chapter 6.95, Article 1) **Also CFC Article 80		
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<i>Fuel Storage, Piping, and Handling (continued)</i>							
Title 19, Division 2, Chapter 4.5 – California Accidental Release Prevention (CalARP) Program Detailed Analysis	Hydrogen storage greater than 10,000 pounds (4,536 kg or 16,879 gallons, specific gravity for LH2 = .071)	OES, UPS	*Local Fire Dept. **Local CUPA	*Annual resubmission **Requires include a RMP and PHA	Federal Risk Management Program		
<i>Environmental Impact</i>							
Title 14, Division 6, Chapter 3 – Guidelines for Implementation of the California Environmental Quality Act	Environmental impact (especially reformation stations) – air emissions, power consumption	Resources Agency	Local planning departments, local AQMD often involved	Required in local permitting process (could result in conditional approval or EIR)	Unique to California Law		
California Health and Safety Code, Section 40000 – APCD/AQMD authority to permit stationary sources	APCD's/AQMD's have authority in California to regulate and permit stationary sources contributing to criteria pollutants in pursuit of each district's Attainment Plan.		Local APCD or AQMD	Permits and programs may vary between APCD's/AQMD's.	Federal Clean Air Act.		
Title 17, Division 1, Chapter 1.8, Article 3 - Distributed Generation Certification Program	Distributed generation emissions sources below local AQMD de minimus for permitting	CARB	CARB	BACT requirement, only listed technologies accepted	California State Senate Bill 1298		

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<i>Fueling Interface, Dispenser, and Access</i>							
Title 4, Division 9	*Mass Flow Meters for CNG (Section 337) **Cryogenic materials metering (Section 334) ***Article 2.2 – Electric Watt-hour metering for sub-metering only (attached for reference only) ****General Code 1.10 for device identification and all areas unaddressed by the individual codes	W&M (under Dept. of Agriculture)	Periodic inspections supposed to be carried out by county officials (typically under local agricultural Commissioner)	*Proactive: lists for type approved devices and installations (under NIST) **Periodic inspection following installation ***Annual inspection for cryogenic meters	*National Conference on Weights and Measures (NCWM) Publication 14 **National Institute of Standards and Testing (NIST) Handbook 44		*An CA listed Authorized Service Agency can place the device in service directly upon installation
California Business and Professions Code, Chapter 14 – Weights & Measures, Petroleum Products (starting at 13400)	Provided here for reference only: W&M has purview of quality verification of all vehicle fuels used in spark-fired or compression engines	W&M (under Dept. of Agriculture)	W&M	Random surveys of fuel stations or inspections conducted upon complaint	ASTM and SAE standards for fuel quality testing		
California Business and Professions Code Section 13660 (some references in Title 24, see CFC/Article 52 above)	User assistance for refueling service, signage requirements, and	DAS	*Local officials (varies) **US Department of Justice (at federal level in case of non-compliance)	*Local officials (on a building permit checklist for instance), county sealers **Department of Fair Employment and Housing (DFEH) [if notified of non-compliance]	*American Disabilities Act (ADA) **American Disabilities Act Access Guidelines (ADAAG) [Federal Building Code]		*Threshold for service (DMV placard), signage requirements, and local enforcement. ** Unruh Civil Rights Act (Civil Code Section 54 Government Code 11.135)

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<i>Fueling Interface, Dispenser, and Access (continued)</i>							
Title 13, Division 3, Chapter 5, Article 3 – Specifications for Alternative Motor Vehicles Fuels, Section 2292.7: Specifications for Hydrogen	Specifications and test methods for hydrogen fuel	CARB	Local AQMD				
<i>Utilities Connection</i>							
Rule 21 for most California utilities agencies	Distributed generation grid output	PUC	*Local utilities agency **PUC in matters of dispute	Local utilities agency requirement for electricity application	IEEE and UL standards referenced		

Acronyms:

OSFM – Office of the State Fire Marshal	NFPA – National Fire Protection Agency	DOSH – Department of Occupational Safety & Health
DSA – Department of the State Architect	DAS – Disability Access Section	CalOSHA – California Occupational Safety & Health Agency
W&M – Weights and Measures	PHA – Process Hazard Analysis	HMMP – Hazardous Materials Management Plan
AQMD – Air Quality Management District	EIR – Environmental Impact Report	OSHPD – Office of Statewide Health, Planning & Development
UPS – Unified Program Section	O/M – Operations and Maintenance	ASME – American Society of Mechanical Engineers
DMV – Department of Motor Vehicles	OES – Office of Emergency Services	NIST – National Institute of Standards and Testing
BACT – Best Available Control Technology	RMP – Risk Management Plan	HMIS – Hazardous Materials Inventory Statement
PUC – Public Utilities Commission	UL – Underwriter Laboratories	IEEE – Institute of Electrical and Electronics Engineers
APCD – Air Pollution Control District	CARB – California Air Resources Board	HCD – Housing and Community Development
HMBP – Hazardous Materials Business Plan	CFC – California Fire Code	CUPA – Certified Unified Program Agency
IAPMO – International Association of Plumbing and Mechanical Officials		

 Sections remaining in earlier draft form.